

## 375 Field Communicator

- *Universal - HART<sup>®</sup> and FOUNDATION<sup>™</sup> fieldbus*
- *User upgradeable*
- *Intrinsically safe*
- *Rugged and reliable*
- *Interfaces with AMS<sup>™</sup> Suite: Intelligent Device Manager*
- *Graphical Interface*



FIGURE 1. The 375 Field Communicator is designed to support all HART and all FOUNDATION fieldbus devices from all vendors.

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# 375 Field Communicator

## INTRODUCTION

The 375 Field Communicator has established itself as the standard in handheld communicators. HART users worldwide told us how to make a better communicator. Fieldbus users said they wanted a portable, intrinsically safe communicator that supported all their fieldbus devices.

The result is the universal, user upgradeable, intrinsically safe, rugged and reliable 375 Field Communicator.



FIGURE 2. A fold-away stand provides the correct viewing angle on the bench, and flips up to a locked position for secure hanging in the plant.

## Product Description

The 375 Field Communicator includes features designed to simplify your work in the field. An intuitive user interface is included for leveraging both HART and FOUNDATION fieldbus devices. It includes a larger touch-screen than PDAs or Pocket PCs, HART Revision 6 and 7 support, and the ability to upgrade your 375 Field Communicator onsite using the Internet.

## See the difference

The 375 Field Communicator runs on Window CE, a robust, real-time, operating system. The touch-screen display uses transfective technology, making it easy to read in both bright sunlight and in normal lighting. To make sure all conditions are covered, a multi-level backlight is included, allowing the display to be viewed in those areas of your plant with dim light. The Graphics Option available for the 375 Field Communicator uses powerful EDDL technology that allows you to read data from field devices in a graphical manner. Charts, graphs, gauges, and product images are just a few of the ways in which important device data can be displayed using the Graphics Option.

The touch sensitive display and large physical navigation buttons provide for efficient use both on the bench and in the field. The weight of the 375 Field Communicator is evenly distributed for comfortable one-handed operation in the field.

## It is loaded!

The 375 Field Communicator has plenty of memory to allow for future expansion. It has 32 MB of application memory and 256 MB of memory on its System Card. The Configuration Expansion Module holds hundreds of device configurations, and it is externally accessible. Enhancements in the battery pack allow a full recharge in 2 hours, 8 times faster than the 275 HART Communicator.

## Easy Upgrade keeps your communicator current

The 375 Field Communicator is also user upgradeable via the Internet. It is no longer necessary to send away to have new device drivers, functionality, or license added to your 375 Field Communicator. New HART and FOUNDATION fieldbus devices, as well as functional updates to existing devices, are introduced continually by device vendors. Keeping up-to-date with the required Device Descriptions (DDs) for all the devices in your plant can be a real challenge. With the *Easy Upgrade* option, keeping your 375 Field Communicator updated with the most current DDs is easy.

As new HART and FOUNDATION fieldbus DDs become available, simply download them from the Internet and upgrade your 375 Field Communicator.

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FIGURE 3. The 375 Field Communicator provides a single tool for configuring and diagnosing HART and FOUNDATION fieldbus devices.

### Universal - HART and FOUNDATION fieldbus

The 375 Field Communicator is designed to support all HART and FOUNDATION fieldbus devices. With new HART and fieldbus drivers being made available all the time over the Internet, you are guaranteed universal HART and fieldbus support in a single, intrinsically-safe handheld communicator.

With over 1000 different HART and FOUNDATION fieldbus devices from more than 100 different vendors, a single field communicator that works with all your devices will positively impact your bottom line.

### Diagnose Network Problems

The 375 Field Communicator can also be used to configure all the FOUNDATION fieldbus devices in your plant. Use it to perform diagnostics for effective

start-up and troubleshooting of FOUNDATION fieldbus segments. Create a quality segment by diagnosing the network DC voltage and average noise.

Detect power supply problems by monitoring low frequency noise on a segment. Locate incorrect terminations and faulty devices by diagnosing the communications signal level.

For HART loops, the 375 Field Communicator allows you to verify whether the DC voltage in the loop is correct.

### User upgradeable

As functional enhancements to HART and FOUNDATION fieldbus applications become available, download the updates from the Internet and upgrade your 375 Field Communicator. It is no longer necessary to send your communicator to a service center to have new DDs or software updates added. *Easy Upgrade* lets you update your own 375 Field Communicator and avoid waiting for your upgrades. Update at your site, within your control, when it's convenient for you.

### Online Licensing

The Online Licensing capability provided with the *Easy Upgrade* option allows you to enable new options for your 375 Field Communicator over the Internet. By using this feature, powerful new options such as FOUNDATION fieldbus and Graphics can be added by merely purchasing these features and downloading them to your 375 Field Communicator.



FIGURE 4. *Easy Upgrade* allows communication between the 375 Field Communicator and a PC using IrDA. The IrDA port enables transfer of configuration data and upgrades between the 375 and AMS Device Manager.

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## Intrinsically Safe

The 375 Field Communicator meets the Intrinsic Safety requirements of the listed regulatory agencies and standards. All of the available Hazardous Locations approvals are provided in a single model option.

- CENELEC/ATEX
- Factory Mutual (FM)
- Canadian Standards Association (CSA)
- FISCO
- IECEx



Even the battery pack is approved for installation in hazardous areas. The 375 Field Communicator is designed for use in areas where laptops cannot go.

## Rugged and Reliable

It's called "Field Communicator" for a reason. Some tasks just have to be performed at the device. The 375 Field Communicator is designed for tough use in your plant or mill.

Its large keys and physical navigation buttons allow for one-handed operation, even with your work gloves on. The rugged display is designed to take the knocks and shocks from normal use in the plant.

The 375 Field Communicator is designed, manufactured and tested to very demanding specifications. The 375 Field Communicator goes wherever you have to go to get the job done.

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# 375 Field Communicator

## Specifications

### Processor and Memory Specifications

#### Microprocessor

80 MHz Hitachi® SH3

#### Memory Internal Flash

32 MB

#### System Card

256 MB or higher secure digital card

#### RAM

32 MB

#### Expansion Module

32 MB or higher secure digital card

### Physical Specifications

#### Weight

Approximately 2 lb. (0.9 kg) with battery

#### Display

1/4 VGA (240 by 320 pixels) monochrome 3.8 inch (9.6 cm) transfective display with touch screen  
Anti-glare coated

#### Keypad

25 keys including 4 action keys, 12 alphanumeric keys, 4 programmable function keys, on/off/standby, and 4 cursor-control (arrow) keys; membrane design with tactile feedback

### Power Supply Specifications

#### Battery Pack

Rechargeable NiMH batteries

#### Battery Operating Time

- 9 hours - continuous use
- 20 hours - typical use
- 40 hours - standby mode

#### Battery Charger Options

Input voltage 85-240 VAC, 50/60 Hz

Cables included with U.S., European, U.K., and Australia plugs

### Connection Specifications

#### Battery Charger

Mini DIN 4-pin jack

#### HART and fieldbus

Three 4mm banana plugs  
(one common to HART and FOUNDATION fieldbus)

#### IrDA Port

IrDA (Infrared Data Access) port supporting up to 115 Kbps

±15 degrees recommended maximum angle from center line

Approximately 12" (30 cm) recommended maximum distance

### Environmental Specifications

#### Usage

-10 °C (14 °F) to +50 °C (122 °F)

0% to 95% RH (non-condensing) for 0°C (32 °F) to +50°C (122°F)

#### Charge

0 °C (32 °F) to +40 °C (104 °F)

#### Storage With Batteries

-20°C (-4 °F) to 55 °C (131 °F)

#### Storage Without Batteries

-20 °C (-4 °F) to +60 °C (140 °F)

#### Enclosure Rating

IP 51 (from front)

#### Shock

Tested to survive a 1-meter drop test onto concrete

### Easy Upgrade Requirements

#### Usage

PC with internet access

CD Rom drive

IrDA port (or adapter)

Windows XP

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## Interfaces with AMS Device Manager

The 375 Field Communicator is fully compatible with AMS Device Manager, the industry standard for asset management software. In fact, Control Magazine readers selected it as the #1 Calibration Software package for 7 years in a row.

AMS Device Manager uses the intelligence from field devices to create a predictive maintenance environment. AMS Device Manager allows you to configure, streamline calibration, document and troubleshoot HART and FOUNDATION fieldbus devices.

Transfer device configuration data to AMS Device Manager via the IrDA port on the 375 Field Communicator and your PC. Carry your 375 Field Communicator out to the field to configure or update one or many devices. Save device configurations in your 375 Field Communicator or transfer to AMS Device Manager. The optional Configuration Expansion Module easily stores 500 or more device configurations safely in your 375 Field Communicator.



FIGURE 5. The Configuration Expansion Module safely stores hundreds of device configurations.

Together, the 375 Field Communicator and AMS Device Manager enable you to more efficiently manage all of your devices, the assets that are the foundation of your process.



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TABLE 1. 375 Field Communicator Spare Parts List

Description	Part Number
Ruggedized 250 Ohm Load Resistor	00275-0096-0001
Rechargeable NiMH Battery Pack with Accessory Case	00375-0002-0011
Power Supply/ Charger (90-240 VAC, 50/60Hz, US/UK/EU connection types included)	00375-0003-0011
Leadset with Connectors	00375-0004-0001
Mounting Straps	00375-0005-0002
Carrying Case (with straps)	00375-0005-0003
Accessory Case (clips to Carrying Case)	00375-0005-0004
Stylus (pack of 5)	00375-0006-0001
IRDA to USB Adapter <sup>(1)</sup>	00375-0015-0002
System Card (SD) Reader (with USB Interface) <sup>(2)</sup>	00375-0018-0022
Expansion Port Plug	00375-0035-0001
System Card - HART with <i>Easy Upgrade</i> Option <sup>(3)</sup>	00375-0042-0003
System Card - HART and FOUNDATION fieldbus with <i>Easy Upgrade</i> Option <sup>(3)</sup>	00375-0042-0004
System Card - HART with <i>Easy Upgrade</i> (3 years) and Graphics <sup>(3)</sup>	00375-0042-0013
System Card - HART and Foundation fieldbus with <i>Easy Upgrade</i> (3 years) and Graphics <sup>(3)</sup>	00375-0042-0014
Configuration Expansion Module	00375-0043-0001
Stand and Utility Plate	00375-0044-0001
Getting Started Guide	00375-0045-0001
User's Manual	00375-0047-0001
Resource CD <sup>(4)</sup>	00375-0049-0001
<b>375 Web Licensing</b>	
FOUNDATION fieldbus License via Web <sup>(4)</sup>	00375-0142-0002
<i>Easy Upgrade</i> (New) License via Web <sup>(3)(4)</sup>	00375-0142-0003
<i>Easy Upgrade</i> (Renew) License via <sup>(3)(4)(5)</sup>	00375-0142-2003
Graphics License via Web <sup>(4)</sup>	00375-0142-0010
<b>AMS Device Manager Handheld Interface Kit</b>	
AMS Device Manager Handheld Communicator Interface Kit (25 tags) <sup>(6)</sup>	AW7005HC00025
AMS Device Manager Handheld Communicator Interface Kit (100 tags and above)	AW7005HC20000

- (1) Can be used to support communication between the 375 Field Communicator and the *Easy Upgrade* Programming Utility or AMS Suite: Intelligent Device Manager (with Handheld Communicator Interface Kit)
- (2) Compared to using IrDA, the System Card (SD) Reader provides a much faster alternative to upgrading a System Card. The ability to use a card reader exists with *Easy Upgrade* Programming Utility 1.4.0 (or higher)
- (3) The *Easy Upgrade* capability allows the user to add new System Application software and Device Descriptions (DDs) to the 375 Field Communicator for a period of 3 years. To upgrade without this feature, the System Card would have to be sent to a Service Center.
- (4) This part is for a field upgrade of System Cards via the web by the end user. An agent may also perform this on the user's behalf. It is at the agent's discretion if an additional fee should apply. Any order must be accompanied by the System Card Serial Number which can be obtained by interfacing the 375 Field Communicator with v 1.4.0 (or higher) of the *Easy Upgrade* Programming Utility. Notification that the licenses are available for download can be sent to an email address provided at time of order.
- (5) The *ReNew* option is available for System Cards where the *Easy Upgrade* license has not been expired for more than 90 days. Date of expiration can be obtained by interfacing the 375 Field Communicator with v 1.4.0 (or higher) of the *Easy Upgrade* Programming Utility.
- (6) Requires AMS Device Manager (V 6.2 or higher). Both AMS Device Manager and the Handheld Communicator Interface Kit are available for sale through select channels only. See [www.ams.assetweb.com](http://www.ams.assetweb.com) for further details. Shipping Weight (varies with options) 7 lbs/3.2 kg (based on 375HR1EKL)

## 375 Field Communicator

## Ordering Information

Model	Product Description
375	Field Communicator <sup>(1)</sup>
Code	Communication Protocol
H	HART
F	HART and FOUNDATION fieldbus <sup>(2)</sup>
Code	Battery Type
R	Rechargeable NiMH Battery Pack
Code	Power Supply/Recharger
1	Power Supply/Recharger (90/240 VAC, 50/60Hz, US/UK/EU connection types included)
2	Power Supply/Recharger (90/240 VAC, 50/60 Hz, US/UK/EU/AU connection types included)
9	Not included <sup>(3)</sup>
Code	Language
E	English
Code	Product Certifications
KL	GENELEC/ATEX, FM, CSA Intrinsically Safe (includes FISCO as applicable)
IG	IECEx Intrinsically Safe (includes FISCO as applicable)
NA	No Approval
Code	Easy Upgrade
U	Easy Upgrade Option <sup>(4)</sup> (3 years)
9	Not Included
Code	Options
B	<b>Spare Battery Pack</b> Spare Rechargeable NiMH Battery Pack <sup>(5)</sup>
C	<b>Expansion Module</b> Configuration Expansion Module <sup>(6)</sup>
G	<b>Additional License Options</b> Graphics Option <sup>(2)(7)</sup>
<b>Typical HART Model Number: 375 H R 1 E KL U</b>	
<b>Typical HART/fieldbus Model Number: 375 F R 1 E KL U</b>	

(1) Base Model 375 includes Field Communicator Unit, System Card, Leadset with Connectors, Carrying Case, Getting Started Guide, User's Manual, 375 Resource CD, Stylus and Straps.

(2) Must specify Easy Upgrade Option (Code U) when ordering this model option.

(3) This option should be considered only if the user already has a 375 Power Supply/Charger. Note: Only 375 Power Supply/Chargers are to be used with the 375 Battery Pack.

(4) The Easy Upgrade capability allows the user to add new System Application software and Device Descriptions (DDs) to the 375 for a period of 3 years. To upgrade without this feature, the System Card would have to be sent to a Service Center.

(5) A fully charged battery pack is capable of delivering power for 8 hours of typical field use. If requirements exceed this specification, a second battery pack is recommended.

(6) The 375 is capable of storing a total of 25 configurations. For increased storage capacity, use the Configuration Expansion Module, which is capable of storing in excess of 500 configurations.

(7) The Graphics Option enables a user to access Enhanced Graphical features when using the HART or FOUNDATION fieldbus applications (as applicable).



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